MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2018/2019

DOM 5018 – OPERATIONS MANAGEMENT

(For Diploma students only)

1 MARCH 2019
3.00 PM – 5.00 PM
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of 6 pages with 2 sections.
2. For Section A, shade your answer in the OMR sheet provided.
3. For Section B, write your answers in the Answer Booklet provided.

SECTION A: MULTIPLE CHOICE QUESTIONS (TOTAL: 20 MARKS)

Instruction: *Answers for this section should be shaded on the OMR form.*

1) _____ would **NOT** be an operations function in a commercial bank.

A. Auditing
B. Teller scheduling
C. Cheque collection
D. Cheque clearing

2) _____ define as a global network of organisations and activities that supply a firm with goods and services.

A. Provider network
B. Vendor network
C. Supply chain
D. Merchant chain

3) _____ does **NOT** represent a reason for globalising operations.

A. Reduce cost
B. Improve supply chain
C. Reduce responsiveness
D. Understand markets

4) Which of the following is the purpose of an organisation's mission statement?

A. Create a good human relations climate in organisation
B. Define the organisation's purpose in society.
C. Define the operational structure of the organisation.
D. Generate good public relations for the organisation.

5) Which of the following time horizon is suitable to forecast new product planning, capital expenditures, and facility location or expansion?

A. Long-range time horizon.
B. Middle-range time horizon.
C. Short-range time horizon.
D. Intermediate-range time horizon.

6) What are the three major factors that used by organisations in planning the new business?

A. Economic, technological, and demand.
B. Strategic, tactical, and operational.
C. Causal, time-series, and seasonal.
D. Departmental, organisational, and territorial.

7) _____ refer to the four stages of product's life cycle.

A. Introduction, growth, maturity, and decline.
B. Introduction, growth, saturation, and maturity.
C. Introduction, maturity, saturation, and decline.
D. Incubation, growth, maturity, and decline.

Continued...

8) Which of the following refers to analysis tool that lists the product in descending order of their individual dollar contribution to the firm?

A. Decision tree analysis.
B. Pareto chart analysis.
C. Value analysis.
D. Breakeven analysis.

9) Which of the following is refer to manufacturing-based definition of quality?

A. Quality is the degree of excellence at an acceptable price.
B. Quality depends on how well the product fit patterns of consumer preferences.
C. Quality is the degree to which a specific product conforms to standards.
D. Quality lies in the eyes of the observer.

10) Who will be affected by the production and marketing of poor quality products?

A. Stockholders, employees, and customers.
B. Suppliers, debtors, and distributors.
C. Stockholders, creditors, and owners.
D. Stockholders and employees.

11) Which of the following is **TRUE** regarding the concept of flexibility?

A. It is the ability to respond with little penalty in time, cost, or customer value.
B. It may be not accomplished with digitally controlled equipment.
C. It may not involve modular or movable equipment.
D. It is does not contribute to competitive advantage.

12) Effective capacity defines as _____

A. maximum output of a system in a given period.
B. capacity a firm expects to achieve given the current operating constraints.
C. average output that can be achieved under ideal facility.
D. minimum usable capacity of a particular facility.

13) What is the reason of industrial location analysis?

A. Minimise costs.
B. Focus more on human resources.
C. Maximise sales.
D. Avoid strict regulations.

14) Which of the following is relating to retail layout strategy?

A. Handling cost should be minimised.
B. Storage costs should be minimised.
C. Space used should be minimised.
D. Maximising customer exposure rate.

Continued...

15) Which of the following refers to optional working four shifts of ten hours instead of five shifts of eight hours?

A. Flexible workweek.
B. Flextime.
C. Part time job.
D. Temporary job.

16) _____ is **NOT** a condition that favours the success of vertical integration.

A. Availability of capital
B. Availability of managerial talent
C. Small market share
D. Sufficiently high demand

17) Which of the following **NOT** relating to the motive for the firm to hold inventories?

A. To decouple various parts of the production process.
B. To provide a selection of goods for anticipated customer demand.
C. To take advantage of quantity discounts.
D. To minimise holding costs.

18) _____ is refer to manufacturing cycle time.

A. Length of the work shift, expressed in minutes per day
B. Time it takes a unit to move from one workstation to the next
C. Time from raw materials receipt to finished product exit
D. Time between the start of one unit of a product

19) _____is specifically characterised by continuous and forced problem solving via a focus on throughput and reduced inventory.

A. Just-In-Time (JIT)
B. Lean Operations
C. Kanban system
D. Material Requirement Planning (MRP)

20) What is the objective of maintenance and reliability?

A. Ensure that breakdowns do not affect the quality of the products.
B. Ensure that no breakdowns will ever occur.
C. Ensure that preventive maintenance cost are kept as low as possible.
D. Ensure to maintain the capability of the system.

[TOTAL 20 MARKS]

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SECTION B: STRUCTURED QUESTIONS (TOTAL: 80 MARKS).

Instruction: *Answer ALL questions. Answers should be written in the answer booklet provided.*

QUESTION 1

Ban is the operation manager at Possh (M) Ltd that produces a wide variety of wooden boxes. With current equipment, the production line is able to produce 2,000 boxes per 100 logs and requires 2 labour-hour to process each log. Ban has considered to outsource the production of log at the same cost so that, he can increase production to 3,000 boxes per 100 logs.

a) Calculate the single –factor productivity for current production. (2.5 marks)

b) If Ban considers to outsource the process of log, what is the new single –factor productivity? (2.5 marks)

c) Calculate the impact on productivity if the company agrees to outsource the process. (3 marks)

d) Ban has decided to look at the productivity from a multifactor perspective. He has determined the labour, capital, energy and material usage. With current production, total labour hours are 320 hours per day. If Ban decides to outsource the process, labour hours will increase to 400 hours per day. The company pays an average of RM10 per hour. The capital and energy usage will remain constant at RM1,000 and RM500, respectively.

   i) Determine the total production costs (in RM) involved for the current production and outsourced production. (7 marks)

   ii) What is the new multifactor productivity for both production? (4 marks)

   iii) Based on calculation in (i) and (ii), does it improve the company's productivity? Justify your answer. (1 mark)

[TOTAL 20 MARKS]

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QUESTION 2

Carol is the operation manager at McDonald's restaurant. The data of monthly sales for Mc Chicken Burger in year 2017 are as follows:

Month	Sales (Unit)
January	2,000
February	2,500
March	3,000
April	4,000
May	3,800
June	4,200
July	5,300
August	5,000
September	4,800
October	5,000
November	4,500
December	3,000

a) Forecast a 3-months moving average for April to December. (9 marks)

b) Plot the monthly sales and the forecast for 3 months moving average sales. (3 marks)

c) Briefly explain the **FOUR (4)** qualitative methods. (8 marks)

[TOTAL 20 MARKS]

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QUESTION 3

Kyoto Motorcycle Corporation is moving to Kanban system to support its crank shaft assembly lines. The production data as follows:

- Setup cost = RM 130 per unit
- Annual holding cost = RM 2600 per unit
- Daily production = 400 units crank shaft
- Daily usage = 80 units crank shaft
- Annual usage = 20,000 units crank shaft (48 weeks' x 5 days' x 80 daily usage)
- Lead time = 2.5 days
- Safety stock = 1 day

a) Determine the size of Kanban for the crank shaft. (4 marks)

b) How many Kanban's are needed? (3 marks)

c) List out the **THREE (3)** advantages of Kanban system. (3 marks)

d) Briefly describe the **FIVE (5)** factors that concerns suppliers on Just-In-Time (JIT) partnership. (10 marks)

[TOTAL 20 MARKS]

QUESTION 4

a) Describe the **FOUR (4)** process strategies. (8 marks)

b) Natalie Hudson has a plant that produces famous frozen cheesecakes named "Zowa". Recently, the plant produced 120,000 frozen cheesecakes per week. The production line operates with three shifts (8 hours/shift) for seven days per week. The line was designed to process the automated packaging at expected output of 1,000 frozen cheesecakes per hour. The effective capacity is 150,000 frozen cheesecakes per week. Compute the capacity utilization and efficiency.

(6 marks)

c) Explain any **THREE (3)** capacity consideration for good capacity decision. (6 marks)

[TOTAL 20 MARKS]

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